

REMARKS

This paper is responsive to the Final Rejection issued May 14, 2010. A Request for Continued Examination (RCE) accompanies this amendment. Reconsideration and allowance of claims 1, 4, 6-9, 11, 13-15, 21, and 24-32 are requested.

The Office Action

Claims 1, 4, and 6-8 stand rejected under 35 U.S.C. § 103 over Sugiura (US 6,359,587) as modified by Bing (US 2004/023649).

Claims 9-11, 13-15, 17, 21, and 24-30 stand rejected under 35 U.S.C. § 103 over Sugiura as modified by Hunzinger (US 2003/0013454).

**The Claims Distinguish Patentably
Over the References of Record**

In the present application, the access points each have a different frequency. There are a sufficiently large number of different frequencies that there is no interference between access points of like frequency and such that a mobile device cannot concurrently interact with two access points of the same frequency. As the mobile unit moves, it scans for the signals of nearby access points and the relative signal strength of the nearest access points is determined. Using a predefined map of the access points and the relative signal strengths, the location of the mobile device is determined.

However, scanning the large number of frequencies of the large number of access points of the wireless network is time and energy consumptive. Accordingly, in the present application, each wireless unit stores a designated subset of the frequencies. For example, the designated subset of frequencies are the frequencies corresponding to the access points which are nearest to the current or predicted future location of the mobile unit. In this manner, the mobile unit need only scan the subset of frequencies, e.g., three, to determine its location rather than scanning all frequencies of the network.

This unique technique for limiting the number of frequencies which need to be scanned to locate the mobile unit is not shown or fairly taught by the references relied upon by the Examiner, taken alone or in combination.

Claim 1 calls for assigning access points to a mobile unit based on the predicted location of the mobile unit and the map. Claim 1 further calls for periodically scanning the frequencies of the access points assigned to the mobile unit and predicting a future location. In this manner, the mobile unit only scans the relatively small number of frequencies assigned to it.

Column 14, line 52+ of Sugiura does not suggest scanning only the frequencies of assigned access points, which assigned access points are based on predicted locations of the mobile unit and a map. Rather, this section relates to transferring a mobile unit to a list of base stations based on relative signal strength.

First, there is no indication in Sugiura that the base stations operate on different frequencies. Second, if the base stations of Sugiura were modified to operate on different frequencies, there is still no teaching in Sugiura or Bing that one should generate the list of base stations by other than scanning the frequencies of all base stations rather than just the frequencies of a limited number of access points assigned to the mobile station.

Accordingly, it is submitted that **claim 1 and claims 4 and 6-8 dependent therefrom** distinguish patentably over the references of record.

Claim 9 calls for measuring actual signal strengths at dedicated frequencies of only a designated subset of the access points and updating the designated subset periodically.

In Sugiura, there is no suggestion that the base stations have different frequencies, nor that one should measure signal strength at only a subset of the available frequencies. Hunzinger was not cited to cure this shortcoming of Sugiura and indeed, does not.

Further, it is submitted that the Examiner is relying not on Sugiura taken alone, but on a combination of Sugiura and Japanese unexamined patent Application No. JP 02-44929. While this unexamined Japanese patent application is not of record, *per se*, Sugiura does summarize it in Figure 20 and column 1, lines 37 – column 2, line 62. It is unclear from the Office Action whether the Examiner proposes to modify Sugiura in view of the unexamined Japanese patent application or to modify the unexamined Japanese patent application in light of Sugiura. It should be noted that the fair teachings of Sugiura and the unexamined Japanese patent

application are contradictory. The unexamined Japanese application is to Sugiura the acknowledged prior art which, according to Sugiura, does not function properly or adequately. Specifically, Sugiura states that the electrical field strength distribution on some base stations are affected by various obstacles or reflections, making it difficult to predict an electric field strength map (column 2, lines 45-51). Therefore, Sugiura *teaches against* the use of a map as disclosed in the unexamined Japanese patent application in favor of the neural network estimation system described starting at column 14 of Sugiura. Thus, Sugiura teaches against the predefined map of the unexamined Japanese patent application.

Accordingly, it is submitted that **claim 9 and claims 10, 11, 13-15, and 21 dependent therefrom** distinguish patentably and unobviously over the references of record.

Claim 24 calls for the mobile unit to have a memory which stores a designated subset of the plurality of frequencies, and for the stored designated subset to be updated based on an updated calculated location and a predefined map. Sugiura does not suggest updating a stored subset of frequencies.

Accordingly, it is submitted that **claim 24 and claims 25, 26, 31, and 32 dependent therefrom** distinguish patentably over the references of record.

Claim 27 calls for a method of handing off a mobile device from one selected communication access point to another based on a predefined map. Sugiura, at column 2, lines 45-51 specifically teaches against the use of a predefined map.

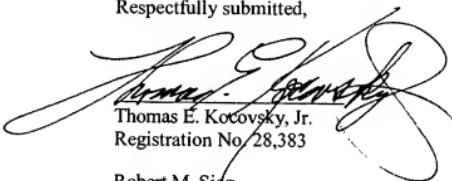
Accordingly, it is submitted that **claim 27 and claims 28-30 dependent therefrom** distinguish patentably and unobviously over the references of record.

CONCLUSION

For the reasons set forth above, it is submitted that all claims distinguish patentably and unobviously over the references of record and are otherwise in condition for allowance. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is requested to telephone Thomas Kocovsky at 216.363.9000.

Respectfully submitted,



Thomas E. Kocovsky, Jr.
Registration No. 28,383

Robert M. Sieg
Registration No. 54,446

FAY SHARPE LLP
The Halle Building, 5th Floor
1228 Euclid Avenue
Cleveland, OH 44115-1843
Telephone: 216.363.9000 (main)
Telephone: 216.363.9122 (direct)
Facsimile: 216.363.9001
E-Mail: tkocovsky@faysharpe.com